

Vermont's Community Water Fluoridation Facts

Background:

- In 1952, the City of Burlington became the first Vermont community to provide fluoridated water to its residents.
- Today, public water systems throughout Vermont have joined Burlington in providing this important community dental public health measure.
- Burlington residents, regardless of socioeconomic status or ability to obtain dental care, receive dental benefits by simply drinking fluoridated water.
- In Vermont, the cost of providing fluoridated water is little over one dollar per person per year. For every dollar spent on fluoridation, as much as \$70 is saved in dental bills. A lifetime cost of fluoridation per person is about the same as the cost of one dental restoration.

Support for Fluoridation:

- Based on 60 years of research studies, fluoridation at the optimal level poses no adverse health risks.
- Research and practical experience indicate that fluoridation has played an important role in the reduction of tooth decay (40 percent to 70 percent in children), and tooth loss in adults (40 percent to 70 percent).
- The Centers for Disease Control and Prevention (CDC) has recognized fluoridation of drinking water as one of the ten greatest public health achievements of the 20th century.

Water Fluoridation:

- Since fluoride is a natural mineral found in rock formations and soil, all water sources in Vermont have varying levels of natural fluoride.
- Before water fluoridation can be considered, the natural fluoride content is analyzed. The amount is adjusted based on the natural fluoride level in a geographic area.
- Extensive research by the United States Public Health Service (the agency responsible for public health) has established optimal fluoride levels in the United States. In Vermont, the optimal fluoride level of 1.1 parts fluoride per million gallons of water (ppm) has been established. Lake Champlain's natural fluoride level is 0.2 ppm. Water from Lake Champlain is adjusted to meet the 1.1 ppm standard.

Vermont's Water Fluoride Facts, Continued

Safety:

- In August 1993, the National Research Council, a branch of the National Academy of Sciences, released a report prepared for the EPA confirming that the current optimal fluoride levels in drinking water do not pose health risks.

Fluoridation of public water systems is regulated by:

- The United States Public Health Service – they established the national optimal fluoride levels.
- Federal safety regulations – under the Safe Drinking Water Act, the US Environmental Protection Agency has established national drinking water safety standards for several chemicals, including fluoride. These standards protect the public against adverse health effects.
- The American Water Works Association (AWWA) set standards for all chemicals used in water treatment. All of the fluoride compounds used in fluoridation meet a purity standard and undergo safety assurance testing for certification.
- The National Sanitation Foundation (NSF) also sets standards and does certification for products used in the water industry, including fluoride chemicals. As a group, the American National Standards Initiative (ANSI), the AWWA and NSF provide product quality and safety assurance, with the aim to prevent the addition of harmful levels of contaminants from water treatment chemicals. Vermont is one of more than 40 states that requires product compliance.
- Every fluoride installation in Vermont is designed by professional engineers according to Centers for Disease Control and Prevention engineering requirements.
- Daily fluoride water testing is mandatory. In addition, the Vermont Department of Health requires that a weekly fluoride water sample be sent to the state laboratory for analysis. On a monthly basis, fluoride test results are reported to the Burlington water treatment plant. In addition, the Burlington water treatment plant has an in-line fluoride analyzer to test and record the fluoride level every four minutes. To evaluate the management of each fluoride installation, the Department of Health conducts routine inspections and monitoring.
- Fluoridation has mistakenly been called “artificial fluoridation” to imply that the process of water fluoridation is unnatural, and that it delivers a foreign substance into the water supply. In fact, the fluoride being added is identical to the natural fluoride found in Lake Champlain.

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